

REMARKS

In the Office Action dated February 26, 2008, claims 5-9 were examined with the result that all claims were rejected. Claims 1-4 and 25-26 were previously canceled, and claims 10-24 have been previously withdrawn from consideration. The Examiner made the rejection final. In response, applicant submits the following remarks. In view of these remarks, reconsideration of this application is requested.

In the Office Action, the Examiner rejects claims 5-9 on the grounds of non-statutory obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent 6,692,839. As the '839 patent is the parent application of the present divisional application, applicant once again states it will file an appropriate Terminal Disclaimer to obviate this double patenting rejection upon the indication of allowable subject matter by the Examiner.

In the Office Action, claims 5-9 were rejected under 35 U.S.C. §103(a) as being unpatentable over Furuta et al U.S. 6,551,371. The Examiner's basic position is that Furuta et al discloses 7 wt. % aluminum and therefore this disclosure reads on "about" 9 wt. % aluminum claimed by applicant. This is because the Examiner believes 7 wt. % aluminum is close enough to 9 wt. % aluminum that one of ordinary skill in the art would have expected the alloys to have the same properties. Finally, the Examiner indicates that applicant has not shown that its coating would not suffer the same brittleness as disclosed by Furuta et al.

First, Applicant would like to emphasize for the record that Applicant is of the opinion that the claims of the present application are not prior published, and are not obvious, in light of Furuta et al. Applicant does not consider Furuta et al to be relevant to the present application for the following reasons:

1. The Examiner is of the view that "7 wt %" from Furuta reads on "about 9 wt %" (i.e. the bottom end of the range of "about 15 at. % and about 30 at. % Al") as it appears in the current claim 5. We respectfully disagree completely with the Examiner's view.

Furuta teaches that the top end value of Al content is 7 wt % or the product is of no use as it is brittle (this has been pointed out to the Examiner already).

The instant claims start at an Al content above 7 wt % (2% above in fact) and produce a product that provides a coating that has a "wider range of commercial applications at high

temperatures, they must be substantially resistant to oxidation and spallation at high temperatures; easy to prepare and fabricate; and be cost efficient" (refer to the paragraph immediately preceding the heading "Object of the Invention"). Such a product simply cannot be brittle or it would have no commercial applications at all. In the Applicant's view, this is why Furuta limits the Al content to a top level of 7 wt % as otherwise the composite material would not be able to be "utilized for high stress component members of a variety of machines" (see the "Technical Field" paragraph in Furuta).

It is worth noting that the second paragraph in the instant disclosure under the heading "Detailed Description of the Invention", refers to the use of titanium based composites in coatings for engine components, such as compressor discs and blade rings. In particular, it says: "Such uses require a satisfactory level of resistance to oxidation and damage of the coating and the underlying substrate component."

This is an almost identical statement of use to that which appears in Furuta, but Furuta says that a composite including above 7 wt % Al will be too brittle for this use. In contrast, the instant application specifies that the composition coating's ability to be used in engine components etc. results from having an Al amount higher than 7 wt %.

The two products must inherently be different. They cannot be the same.

2. The Applicant also points out that the instant claim 5 requires that: "...the discrete ceramic particles are integrally associate with the Ti(Al,O) base matrix and the oxide layer...". This is important as can be seen from the teaching in paragraphs 0067 and 0068 on pages 3 and 4 of the Applicant's published U.S. Application No. 2004/0166338. These paragraphs say:

"[0067] It has been surprisingly found that the titanium based composites, which include discrete particles, as are herein described, have superior high-temperature (i.e. above 600 °C.) oxidation resistance. They also show superior resistance to spallation caused by thermal stress generated by cyclic heating and cooling; from room temperature to about 900 °C.

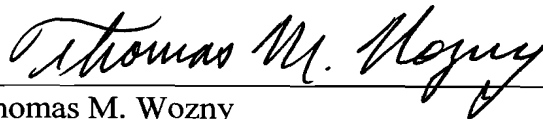
"[0068] Not wishing to be bound by a specific hypothesis, it appears that the discrete particles embedded in the composite form a network in the composite that crosses into the oxide layer. The oxide layer forms a tight adhesion with the discrete embedded particles as well as the Ti(Al,O) matrix. At high temperatures, the interface between the oxide layer, the Ti(Al,O) base matrix and the discrete particles shows no sign of detachment, indicating an excellent adhesion between these phases, as shown by the double arrows in Fig. 4."

This feature of the instant invention is essential to the claims of the instant application, and is nowhere taught in Furuta. This feature also does not form part of the Furuta claims. It would appear to be entirely likely that the reason the Furuta coating is brittle could be that this "integral association" requirement is absent.

As a result, applicant requests the Examiner withdraw the obviousness rejection based upon Furuta et al.

Respectfully submitted,

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